

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/PTO

# INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet 1 of 2

## Complete if Known

Application Number	10/005,085
Filing Date	December 4, 2001
First Named Inventor	Mulligan
Group Art Unit	1775
Examiner Name	Savage, Jason L.
Attorney Docket Number	03248.00045

## U.S. PATENT DOCUMENTS

Examiner Initials *	Cite No. <sup>1</sup>	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number - Kind Code <sup>2</sup> (if known)			
JP		US-4,788,096	11/29/1988	Kalnin, et al.	
		US-5,175,709	12/29/1992	Slayton, et al.	
		US-5,201,022	04/06/1993	Shifflett	
		US-5,869,189	02/09/1999	Hagood, IV, et al.	
		US-6,203,752	03/20/2001	Bwelay, et al.	
		US-6,235,165	12/04/2001	Eyre	
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			

RECEIVED  
MAY 22 2003  
GROUP 1700

## FOREIGN PATENT DOCUMENTS

Examiner Initials *	Cite No. <sup>1</sup>	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T <sup>6</sup>
		Country Code <sup>3</sup> - Number <sup>4</sup> - Kind Code <sup>5</sup> (if known)				

Examiner  
Signature

*Quon*

Date  
Considered

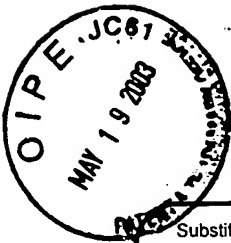
6/18/03

<sup>1</sup> EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>2</sup> Applicant's unique citation designation number (optional). <sup>3</sup> See Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04.

<sup>4</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>5</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>6</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. <sup>7</sup> Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.



Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/PTO

## INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet 2 of 2

### Complete if Known

Application Number	10/005,085
Filing Date	December 4, 2001
First Named Inventor	Mulligan
Group Art Unit	1775
Examiner Name	Savage, Jason L.
Attorney Docket Number	03248.00045

RECEIVED  
MAY 22 2003  
GROUP 700

### OTHER PRIOR ART -- NON PATENT LITERATURE DOCUMENTS

Examiner Initials *	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
af		PCT International Search Report mailed April 23, 2003 (PCT/US02/38648).	

Examiner Signature		Date Considered	6/16/03
-----------------------	---	--------------------	---------

\* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Unique citation designation number (optional). <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

011-  
APR 02 2003  
PATENT & TRADEMARK OFFICE

PTO/SB/08A (10-01)

Approved for use through 10/31/2002. OMB 0651-0031

U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/PTO

# INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet 1 of 2

Complete if Known

Application Number	10/005,085
Filing Date	December 4, 2001
First Named Inventor	Mulligan, et al.
Group Art Unit	1732
Examiner Name	TBA
Attorney Docket Number	03248.00045

RECEIVED  
APR 4 2002  
TC 1700

## U.S. PATENT DOCUMENTS

Examiner Initials *	Cite No. <sup>1</sup>	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number - Kind Code <sup>2</sup> (if known)			
		US-20020237384	09/12/02	Mulligan et al.	
		US- 20020154741	10-24-02	Rigali et al	
		US- 5,053,092	10-01-91	Lachman	
		US- 5,398,193	05-14-95	Deangelis	
		US- 5,588,997	12-31-96	Lysson et al	
		US- 5,679,157	10-21-1997	Milliman	
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			

## FOREIGN PATENT DOCUMENTS

Examiner Initials *	Cite No. <sup>1</sup>	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T <sup>6</sup>
		Country Code <sup>3</sup> - Number <sup>4</sup> - Kind Code <sup>5</sup> (if known)				

Examiner  
Signature

Date  
Considered

6/14/03

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> See Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04.

<sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.



PTO/SB/088(10-01)

Approved for use through 10/31/2002. OMB 0651-0031

U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number

Substitute for form 1449A/PTO

**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

(use as many sheets as necessary)

Sheet 2 of 2

**Complete if Known**

Application Number	10/005,085
Filing Date	December 4, 2001
First Named Inventor	Mulligan, et al.
Group Art Unit	1732
Examiner Name	TBA
Attorney Docket Number	03248.00045

**RECEIVED**  
**APR 4 2003**  
**TC 1700****OTHER PRIOR ART -- NON PATENT LITERATURE DOCUMENTS**

Examiner Initials *	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
JP		PCT International Search Report mailed February 25, 2003, (PCT/US02/38804).	
JP		PCT International Search Report mailed February 28, 2003, (PCT/US02/38654).	
JP		PCT International Search Report mailed March 6, 2003, (PCT/US02/38680).	

Examiner Signature		Date Considered	6/16/03
-----------------------	--	--------------------	---------

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Unique citation designation number (optional). <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached.

+

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/PTO

**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

MAR 28 2002

(use as many sheets as necessary)

Sheet

of

1

**Complete if Known**

Application Number	10/005,085
Filing Date	December 4, 2001
First Named Inventor	MULLIGAN
Group Art Unit	1732
Examiner Name	Unassigned
Attorney Docket Number	003248.00045

**U.S. PATENT DOCUMENTS**

Examiner Initials *	Cite No. <sup>1</sup>	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number - Kind Code <sup>2</sup> (if known)			
JP		US 6,063,502	May 16, 2000	Sue, et al.	
		US 5,645,781	July 8, 1997	Popovic, et al.	
		US 4,772,524	Sept. 20, 1988	Coblentz, William S.	

**FOREIGN PATENT DOCUMENTS**

Examiner Initials *	Cite No. <sup>1</sup>	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T <sup>3</sup>
		Country Code <sup>3</sup> - Number <sup>4</sup> - Kind Code <sup>5</sup> (if known)				
JP		WO 01/53059 A1	7/26/2001	Goretta, et al.		

**OTHER PRIOR ART -- NON PATENT LITERATURE DOCUMENTS**

Examiner Initials *	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
JP		J.J. BRENNAN and K. M. PREWO, "Silicon Carbide Fibre Reinforced Glass-Ceramic Matrix Composites Exhibiting High Strength and Toughness," <i>J. Mater. Sci.</i> , 17 2371-83 (1982)	
JP		G. HILMAS, et al., "Fibrous Monoliths: Non-Brittle Fracture from Powder-Processed Ceramics," <i>Mat. Sci. &amp; Eng.</i> A195, 263-268 (1995)	
		G.E. HILMAS, et al., "SiC and Si <sub>3</sub> N <sub>4</sub> Fibrous Monoliths: Non-Brittle Fracture From Powder Processed Ceramics Produced by Coextrusion," Vol. 51 <i>Ceramic Processing Science and Technology</i> , pp. 609-14 (1993)	
		H. KODAMA, et al., "Silicon Carbide Monofilament-Reinforced Silicon Nitride or Silicon Carbide Matrix Composites," <i>J. Am. Ceram. Soc.</i> , 72 [4] 551-58 (1989)	
		D. KOVAR, et al., "Fibrous Monolithic Ceramics" <i>J. Am. Ceram. Soc.</i> , 80 [10] 2471-2487 (1997)	
		P.J. LAMICQ, et al., "SiC/SiC Composite Ceramics," <i>Am. Ceram. Soc. Bull.</i> , 65 [2] 336-38 (1986)	
		T.I. MAH, et al., "Recent Developments in Fiber-Reinforced High Temperature Ceramic Composites," <i>Am. Ceram. Soc. Bull.</i> , 66 [2] 304-08 (1987)	
		K.M. PREWO, "Fiber-Reinforced Ceramics: New Opportunities for Composite Materials," <i>Am. Ceram. Soc. Bull.</i> , 68 [2] 395-400 (1989)	
JP		K.M. PREWO and J.J. BRENNAN, "High-Strength Silicon Carbide Fibre-Reinforced Glass-Matrix Composites," <i>J. Mater. Sci.</i> , 15 463-68 (1980).	
JP		J.R. STRIFE, et al., "Status of Continuous Fiber-Reinforced Ceramic Matrix Composite Processing Technology," <i>Ceram. Eng. Sci. Proc.</i> , 11 [7-8] 871-919 (1990)	

Examiner  
Signature

Joan Dy

Date  
Considered

6/15/03

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> See Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04.

<sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

RECEIVED  
APR 05 2002  
TC 1700

# INFORMATION DISCLOSURE STATEMENT BY APPLICANT

*(use as many sheets as necessary)*

Sheet

1

**C**

1

Attorney Docket Number

**Complete if Known**

Application Number

**10/005.085**

Filing Date

**December 4, 2001**

**First Named Inventor**

**Anthony C. Mulligan**

### Group Art Unit

1732

**Examiner Name**

not assigned

Attorney Docket Number

003248.00045

## U.S. PATENT DOCUMENTS

[illegible]

## FOREIGN PATENT DOCUMENTS

[illegible]

**Examiner  
Signature**

Date Considered

6/16/03

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> See Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04.

<sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

**Burden Hour Statement:** This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. **DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO:** Assistant Commissioner for Patents, Washington, DC 20231.